

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 13 APR 2006

WIPO

PCT

Applicant's or agent's file reference S6497 JV/PL	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/IB2005/000170	International filing date (day/month/year) 19.01.2005	Priority date (day/month/year) 02.02.2004
International Patent Classification (IPC) or national classification and IPC INV. C23C16/34		
Applicant L'AIR LIQUIDE, SOCIETE ANONYME A DIRECTOIRE ET...		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  31.08.2005	Date of completion of this report  13.04.2006	
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer  Ekhult, H  Telephone No. +31 70 340- 	

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PCT/IB2005/000170

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-10 as originally filed

**Drawings, Sheets**

1/1 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

**see separate sheet**

**Re Item V.**

- 1 Reference is made to the following document:

D1 : WO 03/046254 A (L'AIR LIQUIDE, SOCIETE ANONYME A DIRECTOIRE ET  
CONSEIL DE SURVEILLANCE) 5 June 2003 (2003-06-05)

2 INDEPENDENT CLAIM 1

2.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (page 8 line 1 - page 10 line 9, claims 1-3) a method for producing a silicon nitride film by chemical vapour deposition comprising feeding gaseous tris(isopropylamino)silane and gaseous hydrazine or alkylhydrazine into a chemical vapour deposition reaction chamber that holds a substrate, and forming a silicon nitride film on the substrate by reacting the two gases in the reaction chamber. Since claim 1 is not new, it also lacks an inventive step.

3 INDEPENDENT CLAIM 5

3.1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 5 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (page 11 line 8 - page 12 line 4, claims 4-8) a method for producing silicon oxynitride film by chemical vapour deposition comprising feeding gaseous tris(isopropylamino)silane, gaseous hydrazine or alkylhydrazine and oxygenated gas into a chemical vapour deposition reaction chamber that holds a substrate, and forming silicon oxynitride film on the substrate by reacting these gases in the reaction chamber. Since claim 5 is not new, it also lacks an inventive step.

4 DEPENDENT CLAIMS 2-4, 6-10

Dependent claims 2-4, 6-10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of

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(SEPARATE SHEET)**

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novelty and/or inventive step (Article 33(2) and (3) PCT).

**Re Item VI**

**Certain documents cited**

**Certain published documents**

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO2004/017383	26-02-2004	18-08-2003	18-08-2002
US2004/0132257	08-07-2004	30-10-2003	31-10-2002
WO2004/059707	15-07-2004	18-12-2003	20-12-2002
US2005/0025885	03-02-2005	30-07-2003	30-07-2003